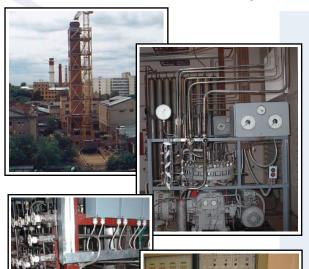




# Medical Isotopes: 0-18, C-13, Xe-129



 Joint venture to develop low-cost production of stable isotopes for medical use

## Oxygen-18 (O-18)

- Demand for PET procedures, metabolism studies has led to worldwide shortage
- Promising research in treatments for obesity, diabetes, other diseases

## Carbon-13 (C-13)

- FDA approval of C-13 breath-tests for ulcers expected to exhaust world supply
- C-13 in MRIs provides unique diagnostic information on cancer/tumor progression and treatment response
- Other uses: NMR diagnostics for brain tumors, cerebral blood clots, diabetes, prostate cancer, other conditions

### Xenon-129 (Xe-129)

- Xe-129 increases MRI sensitivity/suitability for imaging brain, lungs, whole-body
- Enormous potential as diagnostic of many human ailments
- Goals to establish additional world production capacity in Russia, stimulate medical research with expanded supply of key isotopes

# **Commercialization Started**







Particular National Laboratory



Cryocarbon, Ltd.

Moscow, Russia



Lawrence Livermore National Laboratory Livermore, CA

Lawrence Livermore